

WHAT IS CLAIMED IS:

1. A waveguide comprising:
two conductor plates, each conductor plate having a face having a groove therein, at least one of the conductor plates having protrusions extending outward from the face along opposing sides of the groove, the conductor plates
5 being in contact with each other such that the grooves in each of the two conductor plates face each other; and
fasteners disposed distal from the grooves relative to the protrusions, the fasteners fixing the conductor plates with a predetermined pressure.
2. The waveguide according to Claim 1, wherein a surface of the protrusions which contacts the other of the two conductor plates is tapered such that a distance between the surface of the protrusions and the other conductor plate increases as the protrusions extend outwardly from the groove.
3. The waveguide according to Claim 1, wherein a surface of the protrusions facing the other of the two conductor plates is formed by a cutting or a grinding process.
4. The waveguide according to Claim 1, wherein a smoothness of a surface of the protrusions facing the other of the two conductor plates is increased as a result of the predetermined pressure.
5. The waveguide according to Claim 1, wherein the protrusions are formed by molding.

6. The waveguide according to Claim 1, further comprising bumps extending outward from the face of at least one of the two conductor plates, the bumps being disposed distal from the grooves relative to the fasteners.

7. The waveguide according to Claim 6, wherein the fasteners comprise screws which fasten the two conductor plates at points between the protrusions and the bumps.

8. The waveguide according to Claim 6, wherein the bumps have substantially the same height as the protrusions.

9. The waveguide according to Claim 1, wherein the protrusions are formed on both of the two conductor plates, the protrusions of each conductor plate contacting each other when the two conductor plates are in contact with each other.

10. The waveguide according to Claim 1, wherein a dielectric material is disposed in the grooves.

11. A high-frequency circuit having the waveguide according to Claim 1, wherein the waveguide functions as a signal transmission line.

12. A high-frequency circuit device having the high-frequency circuit according to Claim 11, wherein the high-frequency circuit is provided in a processing section of the high-frequency circuit device for transmitting or receiving signals.

13. A waveguide comprising:
a first conductor plate having a face having a groove, the conductor plate having protrusions extending outward from the face along opposing sides of the groove;

5 a second conductor plate having a face and a groove, the second
conductor plate being in contact with the first conductor plate such that the
groove of the first conductor plate faces the groove of the second conductor
plate; and
 fasteners disposed distal from the grooves relative to the
10 protrusions, the fasteners fixing the conductor plates with a predetermined
pressure.

14. The waveguide according to Claim 13, wherein a surface of the
protrusions which contact the second conductor plate is tapered such that a
distance between the surface of the protrusions and the second conductor plate
increases as the protrusions extend outwardly from the groove.

15. The waveguide according to Claim 13, wherein a smoothness of a
surface of the protrusions facing the second conductor plate is increased as a
result of the predetermined pressure.

16. The waveguide according to Claim 13, further comprising bumps
extending outward from the face of one of the first and second conductor plates,
the bumps being disposed distal from the grooves relative to the fasteners.

17. The waveguide according to Claim 16, wherein the fasteners
comprise screws which fasten the first and second conductor plates at points
between the protrusions and the bumps.

18. The waveguide according to Claim 16, wherein the bumps have
substantially the same height as the protrusions.

19. The waveguide according to Claim 13, wherein a dielectric
material is disposed in the grooves.

20. A high-frequency circuit device comprising:
a high-frequency circuit having the waveguide according to Claim 13, wherein the high-frequency circuit is provided in a processing section of the high-frequency circuit device for transmitting or receiving signals.